

**What is claimed is:**

1. An apparatus for detecting luminescence from biological systems in response to magnetic fields comprising:

a magnetic field generator which is placed adjacent to a biological sample and generates a magnetic field to be impressed on said biological sample;  
a photodetector which detects luminescence from said biological sample on which magnetic field is impressed by said magnetic field generator; and  
a dark box which shields said biological sample from external light.

2. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 1, wherein

said biological sample is a biological tissue or cells separated from a living thing.

3. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 2, further comprising a constant-temperature unit which maintains said biological sample at an appointed temperature.

4. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 2, further comprising a luminous material provider which provides luminous material to said biological sample.

5. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 2, further comprising a syringe which provides luminous material to said biological sample.

6. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 2, further comprising an oxygen and carbon dioxide provider which provides oxygen and carbon dioxide to said biological sample.

7. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 1, wherein  
said biological sample is a living thing.

8. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 7, further comprising a infrared filter which is placed between the part to be measured and the said photodetector to intercept the infrared light emitted from said living thing.

9. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 1, wherein  
said magnetic field generator includes a signal generator and a magnetic field generating coil.

10. The apparatus for detecting luminescence from biological systems in response to magnetic fields as described in claim 1, wherein

said photodetector includes a photomultiplier tube and a data counting unit.

11. A method for detecting luminescence from biological systems in response to magnetic fields comprising the steps of:

- (a) preparing a biological sample;
- (b) shading said biological sample from external light;
- (c) impressing a magnetic field on said biological sample; and
- (d) detecting luminescence from said biological sample.

12. The method for detecting luminescence from biological systems in response to magnetic fields as described in claim 11, wherein  
said biological sample is a biological tissue or cells separated from a living thing.

13. The method for detecting luminescence from biological systems in response to magnetic fields as described in claim 12, wherein said preparing step includes the steps of:

- (a) maintaining said biological sample at a certain temperature;
- (b) providing luminous material to said biological sample; and
- (c) providing oxygen and carbon dioxide to said biological sample.

14. The method for detecting luminescence from biological systems in response to magnetic fields as described in claim 11, wherein  
said biological sample is a living thing.